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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/729,365

12/08/2003

Serguei M. Belousov

2230.0030003/MBR/GSB

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06/06/2006

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EXAMINER

RADTKE, MARK A

ART UNIT

PAPER NUMBER

2165

DATE MAILED: 06/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/729,365

Applicant(s)

BELOUSSOV ET AL.

Examiner

Mark A. Radtke

Art Unit

2165

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/30/06.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 7-8, 10, 16-29, 32 and 38-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Wilde (U.S. Patent 5,991,753).

As to claim 1, Wilde teaches a method of accessing a shareable computer file (see Abstract), comprising:

receiving a request to access the shareable computer file (see column 2, lines 55-56, where “receiving” is read on “intercepting”);

retrieving a file ID based on a stub file corresponding to the shareable computer file (see column 7, lines 6-8, where “file ID” is read on “references the migrated file”);

copying the shareable computer file to the stub file if a user attempts to modify the shareable computer file, wherein any modifications are made to the copy (see column 7, lines 53-56);

accessing, based on the file ID, the modified copy if modifications have been made (see column 7, lines 58-59 and lines 61-63, where “file ID” is read on bitfile ID”); and

accessing, based on the file ID, the shareable computer file if modifications have not been made (see column 7, lines 53-56 and figure 8, step 120).

As to claim 2, Wilde teaches further comprising creating a database that includes information for deriving corresponding files names for a plurality of shareable computer files (see column 11, lines 45-54).

As to claims 3 and 27, Wilde teaches further comprising retrieving a file name from the database, wherein the file name corresponds to the file ID (see column 11, line 66 – column 12, line 1).

As to claims 4 and 28, Wilde teaches wherein the file name is derived based on the file ID (see column 11, line 66 – column 12, line 1).

As to claims 5 and 29, Wilde teaches further comprising creating a file tree for the shareable computer files (see column 12, lines 62-64).

As to claims 7 and 25, Wilde teaches wherein the database is generated in operating system space (See column 12, lines 60-62. Since stub files can be shared, then they refer to global memory addresses, as opposed to virtual memory addresses).

As to claims 8 and 26, Wilde teaches wherein the operating system provides access to the database (See column 11, lines 46-48. File identifiers and inode modification times are provided by the OS).

As to claims 10 and 32, Wilde teaches wherein the modified copy of the shareable computer file includes only a portion of the shareable computer file that the user has attempted to modify (See column 7, lines 49-65. A new bitfile must be generated for a modified file. The old bitfile points to the unmodified data, so the difference between the two files is contained in the new bitfile).

As to claims 16 and 38, Wilde teaches wherein the stub file includes a modified copy of the shareable computer file if the shareable computer file was attempted to be modified, and wherein the stub file refers to the shareable computer file if the user has no attempted to modify the shareable computer file (see column 7, lines 49-65).

As to claims 17, 24 and 39, Wilde teaches wherein, if the user has not attempted to modify the shareable computer file, a read-only operation retrieves any of file

contents (see figure 8, step 120), file pointer position (see column 3, lines 44-46) and file size from the shareable computer file (see column 3, lines 21-22).

As to claim 18, Wilde teaches wherein, if the user has not attempted to modify the shareable computer file, the stub file is a zero size file (see column 12, lines 28-29, "zero length setting").

As to claims 19 and 40, Wilde teaches further comprising retrieving file attributes relating to the shareable computer file from the stub file (see column 3, lines 33-34).

As to claim 20, Wilde teaches a system for accessing a shareable computer file (see Abstract), comprising:

For the remaining steps of this claim applicant(s) is/are directed to the remarks and discussions made in claim 1 above.

As to claim 21, Wilde teaches a computer program product for accessing a shareable computer file, the computer program product comprising a computer usable medium having computer program logic recorded thereon for controlling at least one processor (see Abstract), the computer program logic comprising:

For the remaining steps of this claim applicant(s) is/are directed to the remarks and discussions made in claim 1 above.

As to claim 22, Wilde teaches a system for concurrent accessing of files by multiple users (see Abstract), comprising:

a plurality of shareable computer files maintained by the operating system (see column 5, lines 13-20);

a database (see column 11, lines 45-54) including records with file IDs and information for deriving file names of the shareable computer files (see column 7, lines 6-8, where "file ID" is read on "references the migrated file"); and

a plurality of stub files for use by a Virtual Private Server (See Abstract and figure 2. The phrase "for use by" renders everything which follows in that limitation as intended use. The phrase "a Virtual Private Server" will not be given patentable weight.),

wherein the file IDs are derivable from the stub files (see column 11, line 66 – column 12, line 1) and correspond to those shareable computer files that a user has not attempted to modify (See column 7, lines 49-65. A new bitfile must be generated for a modified file. The old bitfile points to the unmodified data, so the difference between the two files is contained in the new bitfile), and

wherein the stub files include modified contents of the shareable computer files for those shareable computer files that the user has attempted to modify (see column 7, lines 49-65).

As to claim 23, Wilde teaches wherein the stub files include file attributes of corresponding shareable computer files (see column 3, lines 34-35).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6, 9, 11, 30-31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilde in view of Menage (U.S. Patent 6,618,736).

As to claims 6 and 31, Wilde does not teach wherein the database is provided by the operating system for use by a Virtual Private Server.

Menage teaches wherein the database is provided by the operating system for use by a Virtual Private Server (see column 8, lines 10-14).

Therefore, it would have been obvious to one of ordinary skill in the relevant art at the time the invention was made to have modified Wilde by the teaching of Menage because “[o]ther computers could be used [...] such as servers” (see Wilde, column 4, lines 59-60). Furthermore, Wilde’s invention can be used transparently to the operating system with any higher-level applications such as a VPS (see Wilde, column 2, line 55, “transparent to the user” and see column 2, lines 26-28).



As to claims 9 and 30, Wilde teaches further comprising creating the stub file prior to the step of retrieving the file ID (See figure 2 and figure 8. The algorithm of figure 2 is performed before the algorithm of figure 8).

Wilde does not explicitly teach further comprising creating the file in a private area of a Virtual Private Server.

Menage teaches creating files in a private area of the Virtual Private Server (see column 2, lines 54-56).

Therefore, it would have been obvious to one of ordinary skill in the relevant art at the time the invention was made to have modified Wilde by the teaching of Menage because “[o]ther computers could be used [...] such as servers” (see Wilde, column 4, lines 59-60). Furthermore, Wilde’s invention can be used transparently to the operating system with any higher-level applications such as a VPS (see Wilde, column 2, line 55, “transparent to the user” and see column 2, lines 26-28).

As to claims 11 and 33, Wilde teaches stub files (see figure 2).

Wilde does not explicitly teach further comprising the step of generating private areas for a plurality of Virtual Private Servers, wherein files of each Virtual Private Server corresponding to the shareable computer file are stored in a private area of a corresponding Virtual Private Server.

Menage teaches further comprising the step of generating private areas for a plurality of Virtual Private Servers, wherein files of each Virtual Private Server

corresponding to the shareable computer file are stored in a private area of a corresponding Virtual Private Server (see column 2, lines 54-56).

Therefore, it would have been obvious to one of ordinary skill in the relevant art at the time the invention was made to have modified Wilde by the teaching of Menage because “[o]ther computers could be used [...] such as servers” (see Wilde, column 4, lines 59-60). Furthermore, Wilde’s invention can be used transparently to the operating system with any higher-level applications such as a VPS (see Wilde, column 2, line 55, “transparent to the user” and see column 2, lines 26-28).

5. Claims 12-15 and 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilde in view of Menage, as applied to claims 11 and 33 above, and further in view of Hay (U.S. Patent Application Publication No. 2002/0103904, Application No. 09/773,848).

As to claims 12 and 34, Wilde, as modified, does not explicitly teach further comprising installing restrictions on the use of resources by each Virtual Private Server.

Hay teaches further comprising installing restrictions on the use of resources by each Virtual Private Server (see paragraph [0014]).

Therefore, it would have been obvious to one of ordinary skill in the relevant art at the time the invention was made to have modified Wilde, as modified, by the teaching of Hay because “[o]ther computers could be used [...] such as servers” (see Wilde, column 4, lines 59-60). Furthermore, Wilde’s invention can be used transparently to the

operating system with any higher-level applications such as a VPS (see Wilde, column 2, line 55, “transparent to the user” and see column 2, lines 26-28).

As to claims 13 and 35, Wilde, as modified, teaches wherein the resources include disk quota and file number quota (see Hay, paragraph [0014]).

As to claim 14, Wilde, as modified, teaches wherein data of the shareable computer file, if modifications have not been made, is shared on a disk between different instances of Virtual Private Servers (see Wilde, column 8, lines 10-13).

As to claim 15, Wilde, as modified, teaches wherein data of the shareable computer file, if modifications have not been made, is shared in computer memory between different instances of Virtual Private Servers (see Wilde, column 8, lines 10-13).

6. Claims 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilde in view of Menage, as applied to claim 34 above, and further in view of Byrnes (U.S. Patent 6,832,249).

As to claim 36, Wilde, as modified, still does not explicitly teach wherein the restrictions include soft limits and hard limits.

Byrnes teaches wherein the restrictions include soft limits and hard limits (see column 9, lines 37-38).

Therefore, it would have been obvious to one of ordinary skill in the relevant art at the time the invention was made to have modified Wilde, as modified, by the teaching of Byrnes because "virtualization may take place at a lower level, such as within a virtual disk drive" (see Menage, column 12, lines 18-19).

As to claim 37, Wilde, as modified, teaches wherein the soft limits become hard limits after a predetermined period of restriction violation (see Byrnes, column 9, lines 40-42).

### ***Additional References***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of art with respect to Unix web server virtualization in general:

"Apache: splitting httpd.conf and sharing with Include". Available online at <http://johnbokma.com/mexit/2005/01/05/apache-httpd-conf-split.html>.

"Apache Virtual Host Documentation". Available online at <http://httpd.apache.org/docs/1.3/vhosts/>

"Dynamically configured mass virtual hosting". Available online at <http://httpd.apache.org/docs/1.3/vhosts/mass.html>.

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"Multiple Apache Installations HOWTO". Available online at  
[http://ez.no/community/articles/multiple\\_apache\\_installations\\_howto](http://ez.no/community/articles/multiple_apache_installations_howto).

**Conclusion**

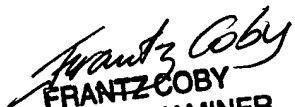
8. Any inquiry concerning this communication or earlier communications should be directed to the examiner, Mark A. Radtke. The examiner's telephone number is (571) 272-7163, and the examiner can normally be reached between 9 AM and 5 PM, Monday through Friday.

If attempts to contact the examiner are unsuccessful, the examiner's supervisor, Jeffrey Gaffin, can be reached at (571) 272-4146.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Customer Service at (800) 786-9199.

maxr  
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30 May 2006

  
FRANTZ COBY  
PRIMARY EXAMINER